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The time period for reply, if any, is set in the attached communication.

1 RECORD OF ORAL HEARING
2
3 UNITED STATES PATENT AND TRADEMARK OFFICE
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6 BEFORE THE BOARD OF PATENT APPEALS
7 AND INTERFERENCES
8
9

10 *Ex parte* TOSHIHIDE HAMAGUCHI
11 and HIROKAZU GENNO
12
13

14 Appeal 2009-014510
15 Application 09/582,874
16 Technology Center 2600
17
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19 Oral Hearing Held: August 3, 2010
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22 Before KENNETH W. HAIRSTON, MARC S. HOFF and
23 CARL W. WHITEHEAD, JR., *Administrative Patent Judges*.
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26 APPEARANCES:
27

28 ON BEHALF OF THE APPELLANT:
29
30

31 WILLIAM L. BROOKS, ESQUIRE
32 Edwards, Angell, Palmer & Dodge, LLP
33 1875 Eye Street, N.W.
34 Washington, D.C. 20006
35 (202) 478-7370
36
37
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1 The above-entitled matter came on for hearing on Tuesday, August 3,
2 2010, commencing at 9:53 a.m., at the U.S. Patent and Trademark Office,
3 600 Dulany Street, Alexandria, Virginia, before Dawn A. Brown, Notary
4 Public.

5 THE USHER: Calendar Number 7, Appeal Number 2009-014510.

6 Mr. Brooks.

7 JUDGE HAIRSTON: You have your business card with you, Mr. Brooks?

8 MR. BROOKS: I don't think I do.

9 JUDGE HAIRSTON: For the record, your last name is spelled B-R-O-O-K-S,
10 right?

11 MR. BROOKS: Yes, it is.

12 JUDGE HAIRSTON: Thank you.

13 MR. BROOKS: Last time I was in here, we had something to write on. You
14 don't have that anymore? I can still do this without it.

15 JUDGE HAIRSTON: Okay. You have to request that ahead of time. We
16 should have one here. That is an oversight.

17 JUDGE HOFF: That is a white board over there.

18 JUDGE HAIRSTON: I'm sorry. I didn't even look over.

19 MR. BROOKS: It just blends in with the wall. I didn't want to write on the
20 wall. If I could just take about three minutes to write up some stuff.

21 JUDGE HAIRSTON: Go ahead.

22 (Pause in the proceedings.)

23 JUDGE HAIRSTON: I thought Hegeler Figure 3 produced a --

24 MR. BROOKS: These are the reference figures the client provided us. I'll
25 explain it to you. It is not representative of figures in the reference.

1 JUDGE HAIRSTON: But in the description of the drawing it says Figure 3 of
2 Hegeler produces a --

3 MR. BROOKS: Right, right, right. The client -- I might just skip this because
4 it might take too long to put this up.

5 JUDGE HAIRSTON: No. Go ahead.

6 (Pause in the proceedings.)

7 MR. BROOKS: Okay. That is probably clear enough to explain this. If you
8 look at the present invention claims, Independent Claims 1, 10 and 11 on
9 appeal are directed to an alerting device and a radio communications device
10 have the alerting devices which produces resonance for the definite period to
11 ensure notification and, therefore, these claims recite a frequency of the drive
12 signal varies as you can see on the top line there.

13 The frequency of the drive signal varies within a range including a resonance
14 frequency of the vibrator in the form of sawtooth waves. The sawtooth waves
15 comprising a portion inclined with respect to the time base or the time axis and
16 a portion perpendicular to the time base. And that is what I'm trying to show
17 in the top drawing right there.

18 The Examiner has admitted that Mittel does not especially disclose this feature
19 but has cited Hegeler for disclosing a frequency of a vibrator in the form of
20 sawtooth waves. So it is admitted that Hegeler discloses a warning-tone signal
21 generator which generates pulses of constant pulse frequency but varying duty
22 cycle.

23 Hegeler also discloses converting square wave pulses to sawtooth wave pulses
24 as you can see in that Reference Figure 4. These are just reference figures to
25 illustrate what I'm talking about.

26 JUDGE HAIRSTON: Okay. Your Figure 4?

1 MR. BROOKS: Right, yeah. This is in contrast to the present invention in
2 which the frequency varies in the form of sawtooth waves as recited
3 Independent Claims 1, 10 and 11 on appeal.
4 Figure 5A in the instant application shows how frequency varies with time in
5 the form of sawtooth wave forms in this case. Both Mittel, et al., in his
6 Figures 3 through 5 and Hegeler teach waveforms of amplitude which vary
7 with time but not waveforms of where the frequency varies with time. As
8 noted above, Hegeler even specifically states that they use a constant pulse
9 frequency.
10 In particular, looking at these Reference Figures 3, 4 and 5, Hegeler discloses
11 as stated by the Examiner converting square wave pulses to sawtooth-shaped
12 pulses in order to enhance a dynamic range. That is Column 4, Lines 1
13 through 15. In Hegeler, Reference Figure 3, the pulse duration, t , of the square
14 rate of pulses varies -- that is the little t -- the duration. You see there is one
15 wide pulse and two narrower pulses. But the frequency, F , is constant.
16 These square wave pulses are converted are sawtooth-shaped pulses shown in
17 Reference Figure 4. Again I've tried to show that little t varies there, the width
18 of the pulses, but the period which means constant frequency is constant up
19 there on the top even though the width might vary. I didn't show it very well.
20 The pulse frequency is not affected by the wave-shaping circuit 15 and,
21 therefore, frequency, F , of the sawtooth-shaped pulses is a constant F of as
22 shown in Figure 5. It is just constant over time.
23 Thus the teaching of Hegeler, which teaches a constant frequency but a
24 sawtooth-shaped waveform and amplitude just is not combinable with any
25 reference to teach the present invention in which the frequency -- the
26 frequency varies in a sawtooth pattern.

1 Let's see what else I want to say here. He did mention -- I think the Examiner
2 mentioned a reference called Mizuno [sic] but he didn't apply it, which shows
3 frequency varying over time in a sawtooth-wave shape. But that, if you look at
4 Figure 2 of Mizuno, that does not show Figure 2 -- Figure 2 shows the
5 frequency varying on a sawtooth wave but does not have the portion
6 perpendicular to the time base as we specifically recite in the claims.
7 So what I'm trying -- mainly, my main issue is that he is mixing apples with
8 oranges, the Examiner is. He is trying to show a sawtooth shape with Hegeler
9 in the frequency domain but really Hegeler is in the time domain with
10 amplitude. He is showing Hegeler has shown a sawtooth wave shape and
11 amplitude, which is completely different than frequency.

12 JUDGE HOFF: Okay. Counsel, your display over here seems to show a
13 variation of frequency with respect to time.

14 MR. BROOKS: Right.

15 JUDGE HOFF: And it seems to indicate that the frequency varies from a
16 negative number to a positive number?

17 MR. BROOKS: I was curious about that too. It might be -- I was looking at
18 the client's reference figures is where I got that from. Oh, that is over time, but
19 this is F_m , so it is really just -- you know, that is a given frequency above zero.

20 JUDGE HOFF: I see.

21 MR. BROOKS: But that is still the time axis. But this figure right here, let's
22 say this goes down to here, this is F_m and that is F_m .

23 JUDGE HOFF: It is similar to your Figure 5A?

24 MR. BROOKS: Yes, yes. Let me make sure. Yeah, I was trying to picture
25 what that would sound like. It would be a woo-woo-woo-woo. Because that
26 frequency would be varying upward and then stop and then start again. That is

- 1 completely different than the sawtooth patterns which will be a set frequency
2 constant.
- 3 So I don't see how you can -- and the clients agree -- we don't see how you can
4 combine Hegeler, which shows amplitude varying in sawtooth, with anything
5 that we're talking about in our claims where the frequency varies in the
6 sawtooth pattern.
- 7 JUDGE HAIRSTON: Okay. Thank you, counselor.
- 8 MR. BROOKS: Okay.
- 9 JUDGE HAIRSTON: We have the issue.
- 10 MR. BROOKS: Pardon?
- 11 JUDGE HAIRSTON: We have the issue.
- 12 MR. BROOKS: Been waiting for this for about three years so I finally got to
13 describe it.
- 14 JUDGE HAIRSTON: For the record, spell the reference Mizuno. Spell it for
15 the record.
- 16 MR. BROOKS: As you noticed, it wasn't -- I think it was mentioned in either
17 an Office Action or the Examiner's Answer. M-I-Z-U-N-O. And I'll give you
18 the patent number.
- 19 JUDGE HAIRSTON: Yes, please.
- 20 MR. BROOKS: 4,674,069.
- 21 JUDGE HAIRSTON: Okay.
- 22 MR. BROOKS: Even though it wasn't applied, the Examiner did mention it.
23 And it did show -- but it definitely doesn't have the vertical part of the
24 sawtooth wave that we specifically recite.
- 25 Do you want me to erase this?

1 JUDGE HAIRSTON: Thank you, counselor. You can leave it. Yeah, go
2 ahead. Save us some time.

3 Whereupon, the proceedings at 10:04 a.m. were concluded.
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